

in Figs. 10 to 17, inclusive, I have shown a type of die for use in producing an article, such as a button, having a surface decoration in three contrasting colors. Thus, it is only necessary to have the lower face of the die conform to the particular pattern to be imparted to the article, three steps in the die being necessary for forming a surface decoration of three contrasting colors.

In carrying out my invention to produce the three-color article, the same general arrangement of molds and dies is used as illustrated in Fig. 1, the only difference being that for a three-tone process steps for three different strokes of the upper die 44 must be provided.

The button, the steps in the fabrication of which are illustrated in Figs. 10-17, is one having a three-color effect in a circular pattern. In such steps, the first impression produces the unfinished portion 45 of the button, such unfinished portion being incompletely cured as hereinabove explained with respect to the du-colored process. Upon this unfinished basic layer is superimposed a layer 46 of resin of a second color, which likewise is not cured completely during the second impression. Superimposed upon the second layer is a third layer 47 of still a different color, the three layers together, upon the third impression, being brought to the final "C" or insoluble and infusible stage by the thermo setting operation.

After the unfinished article illustrated in Fig. 15 has been removed from the cavity of the lower die by the ejector, it is subject to a grinding, polishing, or cutting operation whereby the portions of the two upper layers above the line 43 of Fig. 15 are removed so as to expose the three different layers in concentric circles having contrasting colors as illustrated in Fig. 17.

As pointed out hereinabove, the controlling factor in producing an article of satisfactory composition, appearance and adhesion between the two or more layers of resin, the curing time for the first and intermediate impression should be just long enough to give the material sufficient hardness to withstand the pressure of the subsequent molding operation without losing shape and to prevent the possibility that no bond between the several layers is obtained. The curing time for the last impression should always be long enough to cure fully the first and intermediate layers as well as the final layer.

No particular method of partially removing the superimposed layers is absolutely necessary in carrying out my process. In several different types of articles, different methods of removing the excess material may be advantageously used.

It is obvious that the two particular embodiments of articles selected for illustration of my novel process merely indicate the general nature of a large variety of articles that may be produced in accordance with my process and to this extent the accompanying drawings and description are to be regarded merely as illustrative of a particular embodiment of my invention.

I claim:

1. The method of fabricating, in a single mold, an article of thermo-setting composition material having a surface decoration in two or more contrasting colors, which comprises molding a quantity of such material of one color into a form having a surface, portions of which are depressed from the top plane thereof, by a thermo setting operation, partially curing such material, superimposing upon such partially cured

material at least one layer of uncured, like composition material of a second color, completing the curing of said first layer and completely curing said second layer by heat and pressure, and removing portions of the superimposed layer to expose portions of the base layer, thereby imparting to the finished article a surface decoration in a plurality of contrasting colors.

2. The method of fabricating, in a single mold, an article of thermo-setting synthetic resin material having a surface decoration in two contrasting colors, which comprises molding a quantity of such material of one color into a form having an irregular surface, by a thermo setting operation, partially curing such material, superimposing upon such partially cured material a layer of uncured, like synthetic resin material of a second color, completing the curing of said first layer and completely curing said second layer by heat and pressure, and removing portions of the superimposed layer to expose portions of the base layer, thereby imparting to the finished article a surface decoration in two contrasting colors.

3. The method of fabricating, in a single mold, an article of thermo-setting composition material having a surface decoration in a plurality of contrasting colors, which comprises molding a quantity of such material of one color into a form having an irregular surface, by a thermo setting operation, partially curing such material, superimposing upon such partially cured material another layer of uncured, like composition material of a second color, partially curing said second layer, superimposing a third layer of uncured, like composition material upon said second layer, completely curing all of said layers to bring them into the final, insoluble and infusible stage, by heat and pressure, and removing portions of the superimposed layers to expose portions of the base layer and of the intermediate layer, thereby imparting to the finished article a surface decoration in three contrasting colors.

4. As an article of manufacture, a molded product comprising a base layer of thermo-setting material of one color having depressions in the surface thereof, and a layer of like composition material, of a contrasting color, superimposed upon the surface of the base layer and filling the depressions in such surface, said base layer and superimposed layer constituting together a non-laminated molded product, the juncture between the constituent layers of which is characterized by a flowed-in cohesion of the layers firmly molding them together in insoluble and infusible condition, the flowed-in cohering portion possessing the characteristics of one which is produced by effecting first the partial curing of the base layer, and then the final curing of said base layer simultaneously with the complete curing of the superimposed layer, the product having a surface decoration in a plurality of contrasting colors, and the superimposed layer having throughout its depth the exact outline of the desired design.

5. As an article of manufacture, a molded product comprising a base layer of thermo-setting material of one color having depressions in the surface thereof, an intermediate layer of like composition material superimposed upon and filling the depressions in the surface of the base layer, said intermediate layer having depressions therein, and a third layer of like composition material of a color contrasting with those of the base and intermediate layers, said